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| 10/500,146 | 07/09/2004 | Yasushi Katayama | 253399US6PCT | 5243 |

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

| EXAMINER |
|---|
| NICKERSON, JEFFREY L |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *15 June 2009 and 26 February 2009*.

2a)☐ This action is **FINAL**.  2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-11,13-24,26 and 29* is/are pending in the application.

    4a) Of the above claim(s) *11,13,24,26 and 29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 14-22* is/are rejected.

7)☒ Claim(s) *10 and 23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

## DETAILED ACTION

1.      This communication is in response to Application No. 10/500,146 filed nationally

on 09 July 2004 and internationally on 18 November 2003. The restriction response

presented on 15 June 2009, which elects Group I (claims 1-10 and 14-23), is hereby

acknowledged.  Claims 1-10 and 14-23 have been examined, while claims 11, 13, 24,

26, and 29 have been withdrawn from consideration.

### *Election/Restrictions*

2.      Applicant's election without traverse of Group I in the reply filed on 15 June 2009

is hereby acknowledged.

### *Claim Rejections - 35 USC § 112*

3.      Applicant's response filed 26 February 2009 providing change to the claims is

noted.  All prior rejections under 35 USC 112 are hereby withdrawn.

### *Response to Arguments*

4.      Applicant's arguments, in the RCE filed 26 February 2009, with respect to the

rejections of claims 1 and 14 under 35 USC 103(a) have been fully considered and are

persuasive.  Therefore, the rejection has been withdrawn.  However, new grounds of

rejection may appear below.

## *Claim Rejections - 35 USC § 103*

5.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.      Claims 1-4, 8, 14-17, and 21 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Fradette (US 6,606,698 B2), and in further view of Epstein et al (US

2004/0042479 A1) and Day et al (US 7,260,601 B1).

Regarding claim 1, Fradette teaches an information processing apparatus configured to

server as a reproduction instruction apparatus configured to transmit a data

reproduction process request to a node connected to a network and to execute a data

reproduction process based on return data (Fradette: Figures 3, 11; col 9, lines 28-67),

comprising:

        a packet generating unit configured to set reproduction object data and an

address, and to generate a data reproduction process request packet storing

designation data for the set reproduction object data as a request statement (Fradette:

col 9, lines 28-67);

        a network interface unit configured to transmit the data reproduction process

request packet generated by the packet generating unit (Fradette: col 9, lines 28-67).

Fradette does not teach a data transmission setting unit configured to select one or more data transmission modes, from a plurality of data transmission modes, and to determine a transmission bandwidth percentage for each of the selected one or more data transmission modes according to a demand level of reproduction object data;

wherein the packet address is set in accordance with the transmission bandwidth percentages determined by the transmission setting unit; or

wherein the data transmission mode is a return data transmission mode.

Epstein, in a similar field of endeavor, teaches a data transmission setting unit configured to select one or more data transmission modes, from a plurality of data transmission modes, and to determine a transmission bandwidth allocation for each of the selected one or more data transmission modes according to a demand level of reproduction object data (Epstein: abstract; Figures 5A-6E; [0015]-[0026]; [0029]-[0040]; [0106]);

wherein a data transmission characteristic is the transmission bandwidth allocation (Epstein: abstract; Figures 5A-6E; [0015]-[0026]; [0029]-[0040]; [0106]); and

wherein the bandwidth allocation is a bandwidth percentage (Epstein: [0106]; Figures 5A-6E).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Epstein for determining a bandwidth allocation between transmission methods. The teachings of Epstein, when implemented in the Fradette system, will allow one of ordinary skill in the art to intelligently distribute information using multiple transmission modes, each using

different bandwidth allocations based on demand levels. One of ordinary skill in the art
would be motivated to utilize the teachings of Epstein in the Fradette system in order to
increase the efficiency of communication on the network.

The Fradette/Epstein system does not teach wherein the packet address is set in
accordance with the data transmission characteristic; or

wherein the data transmission mode is a return data transmission mode.

Day, in a similar field of endeavor, teaches wherein the packet address is set in
accordance with the data transmission characteristic (Day: col 1, lines 21-53 provide
packet addresses are function of whether the packet is unicast, multicast, or broadcast);
and

wherein the data transmission mode is a return data transmission mode (Day: col
4, lines 33-47).

It would have been obvious to one of ordinary skill in the art at the time the
invention was made to utilize the teachings of Day for changing the address based on
the distribution characteristic. The teachings of Day, when implemented in the
Fradette/Epstein system, will allow one of ordinary skill in the art to address the packet
based on mode as set forth by the bandwidth percentage. One of ordinary skill in the
art would be motivated to utilize the teachings of Day in the Fradette/Epstein system in
order to enable practicing the system with varying distribution modes, such as multicast
or unicast.

Regarding claim 2, the Fradette/Epstein/Day system teaches wherein the data

transmission setting unit is configured to select the one or more data transmission

modes in accordance with a demand level of the reproduction object data (Day: Figures

3 and 4; col 3, lines 40-62).


Regarding claim 3, the Fradette/Epstein/Day system teaches wherein the data

transmission setting unit is configured to select the one or more data transmission

modes from a carousel transmission mode, a chaining transmission mode, a distributed

cache mode, or a client-server mode (Day: col 3, lines 40-62 provide for unicast).


Regarding claim 4, the Fradette/Epstein/Day system teaches wherein the data

transmission setting unit is configured to use a correspondence between the demand

level of the reproduction object data and band ratios for determining the transmission

bandwidth percentage for each of the selected one or more data transmission modes,

and to select the one or more data transmission modes based upon the demand level

information of the reproduction object data in accordance with the correspondence

(Day: col 3, line 40 – col 4, line 46 provide for utilizing bandwidth and popularity as

considerations when determining transmission characteristics; Epstein: abstract,

Figures 5A-6E, [0015]-[0026], [0029]-[0040], [0106] provide for using relative demand

and relative bandwidth characteristics to determine transmission modes and

percentages).

Regarding claim 8, the Fradette/Epstein/Day system teaches further comprising:

a rule judgment condition setting unit configured to set judgment data for judging

whether the node executes a process satisfying a process request (Fradette: col 8, lines

35-50); and

wherein the packet generating unit is configured to generate the data

reproduction process request packet, which stores the judgment data set by the rule

judgment condition setting unit (Fradette: col 9, line 60 – col 10, line 3).


Regarding claims 14-17 and 21, these method claims contain limitations found within

that of claims 1-4 and 8, respectively, and the same rationales of rejection are used,

where applicable.


7.      Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Fradette (US 6,606,698 B2), in view of Epstein et al (US 2004/0042479 A1) and Day et

al (US 7,260,601 B1), and in further view of Desphande (US 7,191,246 B2).


Regarding claim 5, the Fradette/Epstein/Day system teaches wherein the data

transmission setting unit is configured to determine the transmission bandwidth

percentage for each of the selected one or more data transmission modes in

accordance with a value of a demand level x determined by demand information, a

band percentage y for each of the selected one or more data transmission modes, and

an identification value n of each of the data transmission modes, the demand

information being related to the reproduction object data (Epstein: abstract, Figures 5A-6E, [0015]-[0026], [0029]-[0040], [0106] provides for setting bandwidth percentage for each mode based on demand, the sum being the total bandwidth available, ie percent sum being 1; Day: col 3, line 40 – col 4, line 46 for modes being multicast/unicast/broadcast and identifying between, characteristics being popularity, and percent channel utilization).

The Fradette/Epstein/Day system does not teach wherein the calculation is determined by adopting a function group.

Desphande, in a similar field of endeavor, teaches wherein the calculation is determined by adopting a function group (Desphande: col 5, lines 26-62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Desphande for adopting a function group. The teachings of Desphande, when implemented in the Fradette/Epstein/Day system, will allow one of ordinary skill in the art to use a function group to determine transmission percentages between modes based on multiple characteristics. One of ordinary skill in the art would be motivated to utilize the teachings of Desphande in the Fradette/Epstein/Day system in order to provide accurate and concrete results when practicing the system.

Regarding claim 18, this method claim contains limitations found within that of claim 5 and the same rationale of rejection is used, where applicable.

8.      Claims 6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Fradette (US 6,606,698 B2), in view of Epstein et al (US 2004/0042479 A1) and Day et

al (US 7,260,601 B1), and in further view of Gemmell (US 6,678,855 B1).


Regarding claim 6, the Fradette/Epstein/Day system teaches wherein the data

transmission setting unit is configured to select a broadcast transmission mode as the

return data transmission mode, when the demand level of the reproduction object data

is higher than a preset threshold value (Day: col 3, line 40 – col 4, line 46).

        The Fradette/Epstein/Day system does not teach wherein a transmission mode is

a carousel transmission mode.

        Gemmell, in a similar field of endeavor, teaches wherein a transmission mode is

a carousel transmission mode (Gemmell: abstract).

        It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of Gemmell for using a carousel mode.  The

teachings of Gemmell, when implemented in the Fradette/Epstein/Day system, will allow

one of ordinary skill in the art to use a carousel mode when popularity was high.  One of

ordinary skill in the art would be motivated to utilize the teachings of Gemmell in the

Fradette/Epstein/Day system in order to enable practicing the system.


Regarding claim 19, this method claim contains limitations found within that of claim 6

and the same rationale of rejection is used, where applicable.

9.      Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Fradette (US 6,606,698 B2), in view of Epstein et al (US 2004/0042479 A1) and Day et

al (US 7,260,601 B1), and in further view of Noma et al (US 2003/0055988 A1).


Regarding claim 7, the Fradette/Epstein/Day system teaches a data recovery

processing unit configured to execute processing for the reproduction object data, which

is extracted from packets received from the node (Fradette: col 5, lines 8-30).

The Fradette/Epstein/Day system does not teach wherein the processing is a de-

interleave process and an FEC decoding process.

Noma, in a similar field of endeavor, teaches wherein the processing is a de-

interleave process and a FEC decoding process (Noma: [0044]).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of Noma for using

interleaving/deinterleaving and FEC encoding/decoding of the data.  The teachings of

Noma, when implemented in the Fradette/Epstein/Day system, will allow one of ordinary

skill in the art to interleave and encode data transmitted.  One of ordinary skill in the art

would be motivated to utilize the teachings of Noma in the Fradette/Epstein/Day system

in order to quickly and reliably correcting transmission errors.


Regarding claim 20, this method claim contains limitations found within that of claim 7

and the same rationale of rejection is used, where applicable.

10.    Claims 9 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Fradette (US 6,606,698 B2), in view of Epstein et al (US 2004/0042479 A1) and Day et

al (US 7,260,601 B1), and in further view of Fukunaga et al (US 6,282,240 B1).


Regarding claim 9, the Fradette/Epstein/Day system teaches wherein the packet

generating unit is configured to generate a packet storing judgment data (Fradette: col

9, lines 52-62).

        The Fradette/Epstein/Day system does not teach wherein the rule judgment

condition setting unit is configured to set a probability value as a reproduction rule

judgment condition statement for judging whether the node executes the process

satisfying the process request; and

        wherein judgment data is the probability value.

        Fukunaga, in a similar field of endeavor, teaches wherein the rule judgment

condition setting unit is configured to set a probability value as a reproduction rule

judgment condition statement for judging whether the node executes the process

satisfying the process request (Fukunaga: col 5, lines 18-48); and

        wherein judgment data is the probability value (Fukunaga: col 5, lines 18-48).

        It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of Fukunaga for calculating the probability a

node would execute a process.  The teachings of Fukunaga, when implemented in the

Fradette/Epstein/Day system, will allow one of ordinary skill in the art to make a

selective target determination.  One of ordinary skill in the art would be motivated to

utilize the teachings of Fukunaga in the Fradette/Epstein/Day system in order to allow

selective retransmissions if the target is anticipated as not processing the request,

thereby decreasing response time.

Regarding claim 22, this method claim contains limitations found within that of claim 9

and the same rationale of rejection is used, where applicable.

## Allowable Subject Matter

11.    Claims 10 and 23 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

## Citation of Pertinent Prior Art

12.    The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

      a.    Chawla et al (US 6,876,668 B1) discloses a system that reserves

bandwidth percentages for sessions based on session-content characteristics.

      b.    Fukunaga et al (US 6,775,020 B2) discloses a system for adjusting

bandwidth values based on transmission content characteristics.

      c.    Sheeran (US 6,909,726 B1) discloses a system with dynamic bandwidth

allocation based on customer usage patterns.

## *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY NICKERSON whose telephone number is (571)270-3631. The examiner can normally be reached on M-Th, 9:00am - 7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. N./
Jeffrey Nickerson
Examiner, Art Unit 2442

/Andrew Caldwell/
Supervisory Patent Examiner, Art Unit 2442